

## **AMENDMENTS**

Please amend the present application as follows:

### **In the Specification**

The following is a marked-up version of the specification with the language that is underlined ("\_\_\_\_") being added and the language that contains strikethrough ("——") being deleted:

#### **For the paragraph beginning at page 13, line 20:**

Figure 4 includes the different functional units of a mass spectrometer that may be represented conceptually in the block diagram 18 of Figure 4. A sample may be introduced via an inlet 156 into a vacuum chamber. It should be noted that a sample may be in any one of a variety of different forms including, for example, a liquid solution, embedded in a solid matrix, or a vapor. Depending on the type of inlet and ionization techniques used, the sample may already exist as ions in solution, or it may be ionized in conjunction with its volatilization or by other methods in the ion source 150. In this embodiment, as the sample is introduced into the inlet 156, the sample is placed in a gas phase and then charged to produce ions. The ions are sorted by an analyzer 152 according to their mass-to-charge or  $m/z$  ratios and then collected by an ion detector 154. In the ion detector 154, the ion flux may be converted to a proportionate electrical current. Output of the ion detector 154 ~~54~~ serves as an input to the data system 158 recording the magnitude of the various electrical signals as a function of the  $m/z$  ratios and converting the information into mass spectrometer data 20.

**For the paragraph beginning at page 19, line 11:**

Referring now to Figure 9 8, shown is an example of a graphical illustration 350 representing XICs for four different  $m/z$  values overlaid. All four  $m/z$  values are co-eluting at a scan point T as identified on the illustration 350. However, note that only ions 3 and 4 are co-varying. Co-varying ions in this example may be visible in a contour plot as shown in Figure 7 as a series of horizontal bars arranged in a column. However, when the XICs of the corresponding ions 3 and 4 are examined, similarity in elution profiles may be observed. These observations regarding covariance may be utilized in the processing steps described herein.